ABSTRACT

PROVIDING INTERNAL LINING WORKS AND DEVELOPMENT OF APPROACH ROADS TO BELLAHALLI QUARRY SY 13 YELAHANKA WARD NO.05

Sl No	Name of work	Estimate amount (in lakhs)
1	Quarry pit filling with mixed MSW as per design and suggestion of IISC scientists	438.39
2	Providing security services for 9 months.	7.31
3	Machineries and Man power requirement	220.70
4	Spraying of chemical to control fly and mosquito menace in village	51.87
5	Spraying of chemical to solid waste	177.84
6	Road formation for vehicle to access the quarry	33.56
7	Drilling of borewell	6.90
	SUB TOTAL	936.58
	KRIDL Charges at 9%	84.29
	PMC Charges at 1.5%	14.05
	Miscellaneous and rounding off	0.03
	Total	**1034.95**

Executive Engineer
Byatarayanapura Division
Yelahanka Zone, B.B.M.P.
Bangalore - 560 092

Administrative Approval
Accorded For 1034.95 Lakhs
Head of A/C P-3110
CER NO :...01/15-16 Dt:21 - 03/16

TA CE (YNK)(P) 24/3/16.

Technical Sanction
Accorded For 1034.95 lakhs.
Head of A/C P 3110
CER NO :...139... Dt:..21 03/16

TA CE (YNK)

BRUHAT BENGALURU MAHANAGARA PALIKE									
Quarry pit filling with mixed MSW as per design and suggestion of IISC scientists									
PIT-1							Est Cost: Rs.	438.39	Lakhs
Sl. No.	**Particulars**	**Unit**	**No.**	**Length**	**Breadth**	**Height**	**Qty.**	**Rate**	**Amount**
1	De watering of accumulated water (3.5 Kltr/Hour capacity) including hire charges of two labours and Tractor								
		days	**60.00**				**60.00**	**3454.00**	**207240.00**
2	KSRB 2.2-7: Benching hard rock 5 to 7.5 cm depth. for seating of foundation, including cost of all labour complete as per specifications. specification. No. KBS 2.1(a) / 2.3.1 (PWD SR 2015-16, Page -6/ Item no.2.9, selected arears at bottom and sides.(Basic rate-Rs.1273.00/-+3% area weightage)=1311.19Rs/cum)								
	For Chiseling of Sharp Surfaces		1	75.00		13.00	975.00		
		Sqm					**975.00**	**1311.19**	**1278410.00**
3	Supply and laying of 200 gsm Non-woven Geotextile (Polypropylene) of thickness 2 mm at 2 kPa at the bottom and sides of landfill. The geotextile shall be made from virgin PP stable fibres and bonded by needlepunching technology inclusive of all taxes PWD SR 2015-16								
	Bottom liner system	Sqm	1.00	102.50	75.00		7687.50		
	Top Liner system	Sqm	1.00	565.00		13.00	7345.00		
		Sqm					**15032.50**	**215.00**	**3231988.00**
4	Providing, Supplying, Laying of 1.5 mm thick black HDPE texured Geomembrane including fabrication charges, all taxes and transportation etc. PWD SR 2015-16								
	Bottom liner system	Sqm	1.00	102.50	75.00		7687.50		
	Side liner system	Sqm	1.00	565.00		13.00	7345.00		
	Market Rate	Sqm					**15032.50**	**638.00**	**9590735.00**
5	KSRRB 300-53. Construction of embankment with approved material gravel/murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement table 300-2 aomplete as per specifications. (Which includes cost of gravel / murrum watering charges & compaction by vibratory roller) MORTH specification No 305 (P.No.147, I.No.19.60) complete as per specifications and the directions of engineer incharge of the work.(1day=362cum mud capping)								
		day	275.00		362.00		99550.00		
							99550.00	**296.64**	**29530512.00**
	Sub Total								**43838885.00**
12	Miscellaneous unforseen and rounding off								**0.00**
	Total Rs.								**43838885.00**

Certificate :

1 Certified that the work spot inspected by me.

2 Certified that the provisions made in the estimate are minimum & quite essential.

3 Certified that the estimate is prepared based on Bangalore PWD Circle SR 2015-16

Assit Engineer
SWM, BBMP

Asst. Exe.Engineer
SWM, BBMP

Executive Engineer
Byatarayanapura Division
Yelahanka Zone, B.B.M.P.
Bangalore - 560 092

BRUHAT BENGALURU MAHANAGARA PALIKE									
Providing security services for 9 months.									
							Est Cost: Rs.	7.31	Lakhs
Sl. No.	**Particulars**	**Unit**	**No.**		**Months**		**Qty.**	**Rate**	**Amount**
1	Ex-Serviceman/ Night Watchman								
	4 Nos X 2 Shifts of 12Hrs per Day		8		9.00		72.00		
		Nos					**72.00**	**10150.85**	**730861.00**
								Sub Total	**730861.00**
	Miscellaneous and rounding off								0.00
								Total Rs.	**730861.00**

Certificate :

1 Certified that the minimum wages as per circular of labour department is adopted.

2 Certified that the provisions made in the estimate are minimum & quite essential.

Assit Engineer

Asst. Exe.Engineer

Executive Engineer

Executive Engineer
Byatarayanapura Divisio
Yelahanka Zone, B.B.M.P
Bangalore - 560 092

BRUHAT BENGALURU MAHANAGARA PALIKE									
Machineries and Man power requirement									
							Est Cost: Rs.	220.70	Lakhs
Sl. No.	**Particulars**	**Unit**	**No.**	**hrs**	**Days**		**Qty.**	**Rate**	**Amount**
1	Engaging hydraulic excavator Hitachi on Hire basis including cost of fuel, crew charges etc Complete for Re-handling, heaping, spreading & forming of the MSW received at Dump yard & landfill site.								
			3.00	8.00	275.00		6600.00		
		Hrs					**6600.00**	**2302.50**	**15196500.00**
2	Engaging of JCB on Hire basis including cost of fuel, crew charges etc Complete for Re-handling, heaping, spreading & forming of the MSW received at Dump yard & landfill site. PWD SR 2015-16 page XXXVII item 23. For formation of road for movement of garbage carrying vehicles on to land fill, to assist the transporting vehicles that would struck in slush and any such unwaranted situations.								
			2.00		275.00		550.00		
		Days					**550.00**	**6720.00**	**3696000.00**
3	Engaging Tractor of 50 HP capacity including the cost of crew and fuel charges etc complete for collection spilled garbage in approach road (Page No:XXXVIII, Item No:20) PW, P &IWTD, Bangalore Cicrle SR 2015=16, For cleaning of spilled garbage from garbage transporting vehicles from Budigere cross to Mandur MSW processing/ disposal units and to dispose in land fill.								
			1.00		275.00		275.00		
		Days					**275.00**	**2512.00**	**690800.00**
4	Engaging Heavy Mazdoor for maintainance of garbage handling watering for road etc as per the directions of Engineer in charge. (Cleaning labour), For cleaning of spilled garbage from garbage transporting vehicles on approach roads to disposal units and to dispose in land fill.								
			7.00		275.00		1925.00		
		nos					**1925.00**	**244.55**	**470759.00**
5	Water tanker for watering the road 5 times a day								
			5.00		275.00		1375.00		
		nos					**1375.00**	**485.60**	**667700.00**
6	Ten wheeler tipper for shifting of soil to landfill site for capping.								
			2.00		275.00		550.00		
		nos					**550.00**	**2016.00**	**1108800.00**
7	Engaging Field Assistants for supervision of maintenance work of MSW handling as per the directions of Engineer in charge, For supervision and monitoring of the garbage disposal in the land fill, listing of vehicles, cleaning of spilled garbage etc.								
			4.00		245.00		980.00		
		nos					**980.00**	**244.55**	**239659.00**
								Sub Total	**22070218.00**
	Miscellaneous and rounding off								0.00
								Total Rs.	**22070218.00**

Certificate :

1 Certified that the work spot inspected by me.

2 Certified that the provisions made in the estimate are minimum & quite essential.

3 Certified that the estimate is prepared based on Bangalore PWD Circle SR 2015-16 and Minimum wages as per circular of Labour department.

Assit Engineer

Asst. Exe.Engineer

Executive Engineer

Executive Engineer
Byatarayanapura Division
Yelahanka B.B.M.P.
Bangalore - 560 092

BRUHAT BENGALURU MAHANAGARA PALIKE									
Spraying of chemical to control fly and mosquito menace in village									
							Est Cost: Rs.	52.11	Lakhs
Sl. No.	**Particulars**	**Unit**	**No.**	**Length**	**Breadth**	**Height**	**Qty.**	**Rate**	**Amount**
1	Supplying of premise chemical for spraying to control flymenace.Quantity @ 4.00 Ltr/ Day								
		Ltr	4.00	220.00			880.00		
						Ltr	**880.00**	**3130.00**	**2754400.00**
2	Supplying of Sugar to mix with the chemical along with the water. For spraying to controle fly menace Quantity @ 25 Kg/ Day								
		kgs	25.00	220.00			5500.00		
						kgs	**5500.00**	**40.00**	**220000.00**
3	Supplying of Baytex chemical for spraying to control Mosquito menace.Quantity @ 4.17 Ltr/ Day								
		Ltr	4.00	220.00			880.00		
						Ltr	**880.00**	**1915.00**	**1685200.00**
4	Spraying of premise chemical solution prepared by mixing the Chemical with sugar and water @ the ratio 5ml of chemical for 1 litre of water to control fly menace. Spraying Labours - 5 Nos								
		Nos	5.00	220.00			1100.00		
						Nos	**1100.00**	**244.55**	**269005**
5	Spraying of Baytex chemical solution prepared by mixing with water @ the ratio 10ml of chemical for 1 litre of water to control mosquito menace Spraying Labour - 5 Nos								
		Nos	5.00	220.00			1100.00		
						Nos	**1100.00**	**244.55**	**269005.00**
6	Procuring of spraying machines to spray above solutions.								
		Nos	6.00				6.00		
						Nos	**6.00**	**2250.00**	**13500.00**
								Sub Total	**5211110.00**
	Miscellaneous and rounding off								**0.00**
								Total Rs.	**5211110.00**

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3 Certified that the estimate is prepared based on Bangalore PWD Circle SR 2015-16

Assit Engineer

Asst. Exe.Engineer

Executive Engineer

Executive Engineer
Byatarayanapura Division
Yelahanka Zone, BBMP
Bangalore - 560 092

BRUHAT BENGALURU MAHANAGARA PALIKE									
Spraying of chemical to solid waste									
							Est Cost: Rs.	177.84	Lakhs
Sl. No.	**Particulars**	**Unit**	**No**				**Qty.**	**Rate**	**Amount**
1	Supply and spraying of bio ensymes solution by setting of bioreactor at site to required ratio using leachates including cost to bio enzymes and air pumps. **(APPROXIMATE)**								
		Ltr	608000.00				608000.00		
						Ltr	**608000.00**	**24.00**	**14592000.00**
2	Using aromatic oils in spraying on garbage.**(APPROXIMATE)**								
		Ltr	2280.00				2280.00		
						Ltr	**2280.00**	**1400.00**	**3192000.00**
								Sub Total	**17784000.00**
	Miscellaneous and rounding off								**0.00**
								Total Rs.	**17784000.00**

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Executive Engineer

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Byatarayanapura Division
Yelahanka Zone, B.B.M.P.
Bangalore - 560 092

BRUHAT BENGALURU MAHANAGARA PALIKE

Road formation for vehicle to access the quarry

Est Cost: Rs. 33.56 Lakhs

Sl. No.	Particulars	Unit	No.	Length	Breadth	Height	Qty.	Rate	Amount
1	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location and complete as per specifications. MORTH Specification No.301 and the directions of engineer incharge of the work.								
	road		1	840.00	6.00	0.30	1512.00		
		Cum					**1512.00**	**136.40**	**206236.80**
2	KSRRB 300-53. Construction of embankment with approved material gravel/murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement table 300-2 aomplete as per specifications. (Which includes cost of gravel / murrum watering charges & compaction by vibratory roller) MORTH specification No 305 (P.No.147, I.No.19.60) complete as per specifications and the directions of engineer incharge of the work.								
	road			840.00	6.00	0.65	3276.00		
		Cum					**3276.00**	**311.04**	**1018967.04**
3	KSRRB 300-Compaction KSRRB 300-58. Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3 P.NO.148.I.NO.19.64								
	road			840.00	6.00		5040.00		
		sqm					**5040.00**	**4.86**	**24494.40**
4	Providing, laying, spreading and compacting crushed stone aggregates of Granite/ trap/ basalt of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with 3 wheeled/ vibratory roller 8 - 10 tonnes in stages to proper grade and chamber, applying and brooming requisite type of screening / binding/ materials of fill up the interstics of coarse aggregates, watering and compacting to the required density complete as per specification. A by manual means crushable type such as moorum or gravel for grading II, MORTH Specifications No. 405 complete as per specification								
	Main road		1	840.00	6.00	0.10	504.00		
		Cum					**504.00**	**1614.60**	**813758.40**
5	Providing, laying, spreading and compacting crushed stone aggregates of Granite/ trap/ basalt of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with 3 wheeled/ vibratory roller 8 - 10 tonnes in stages to proper grade and chamber, applying and brooming requisite type of screening / binding/ materials of fill up the interstics of coarse aggregates, watering and compacting to the required								
	main road		1	840.00	6.00	0.150	756.00		
		sqm					**756.00**	**1709.64**	**1292487.84**
								Sub Total	**3355944.48**
	Miscellaneous and rounding off								**0.00**
								Total Rs.	**3355944.48**

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3 Certified that the estimate is prepared based on Bangalore PWD Circle SR 2015-16

Assit Engineer

Asst. Exe.Engineer

Executive Engineer

Executive Engineer
Byatarayanapura Division
Yelahanka Zone, B.B.M.P.
Bangalore-560 092

BRUHAT BENGALURU MAHANAGARA PALIKE									
Drilling of borewell									
							Est Cost: Rs.	6.90	Lakhs
Sl. No.	**Particulars**	**Unit**	**No.**	**Length**	**Breadth**	**Height**	**Qty.**	**Rate**	**Amount**
1	Geophysical investigation of site for sinking Borewell for supplying drinking water to the habitation either through the Hand pump, MWS of P.W.S.S by vertical electrical sounding by adopting Venner or Schlumberger's method, including reconnaissance survey of geological formation, Gerophysical investigation of existing Ground Wate in the vicinity, its qualityf 1.0 meter in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instrument and accessories to work site., engaging techinical personal and labour required etc., as per Specification and direction (P.48, I. 9.4)								
		Nos	3				3.00		
							3.00	**1882.00**	**5646.00**
2	Sinking borewell of 160 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above in all strata including over bureden upto 20 m fixing of casing pipes, collars and cap with necessary cutting, threading and welding including transportation of rig and supporting vehicle, crew charges and cost of comsumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding cost of casing pipes, collars, cap etc.,) (Page No 46) Item No-9.1)								
	from 0.00 m to 50m	Nos	3	50.00			150.00	315.18	**47277.00**
	from 50 m to 100 m		3	50.00			150.00	412.00	**61800.00**
	from 100 m to 150 m		3	50.00			150.00	458.35	**68752.50**
	from 150 m to 200 m		3	50.00			150.00	484.10	**72615.00**
	from 200 m to 250 m		3	50.00			150.00	560.32	**84048.00**
	from 250 m to 300 m		3	50.00			150.00	600.49	**90073.50**
3	Providing and fixing of Borewell cap 175mm dia (page No - iii) (sl No.85)								
		Each	3				3.00		
							3.00	**100.00**	**300.00**
4	Supply and delivery at site brand new Texmo/ Innoval/ Lubi/ Sabar/ Atalanta/ Calamal make suitable HP deep well submersible pumpset suitable for vertical installation in 150mm dia borewells comprising of single stage or multistage CF pump close coupled by means of stainless steel coupling to suitable HP								
		Nos	3.00				3.00		
							3.00	**60084.36**	**180253.08**
5	Supply of ISI marked galvanized MS tube, nominal bore screwed at both ends as per IS 554/ 1986 with latest amendments with random lenghts amendments with random lenghts of 4 to 7 mtrs. Conforming to IS 1239.								
		Rmtr	3.00	18.00			54.00		
							54.00	**1325.00**	**71550.00**
6	MS casing pipe Heavy duty collar "C" class 50 mm dia P.No 86, PRED 12-13 SR								
		Nos	3.00	18.00			54.00		
							54.00	**150.00**	**8100.00**
								Sub Total	**690415.08**
	Miscellaneous and rounding off								0.00
								Total Rs.	**690415.08**

Certificate :

1 Certified that the work spot inspected by me.

2 Certified that the provisions made in the estimate are minimum & quite essential.

3 Certified that the estimate is prepared based on Bangalore PWD Circle SR 2015-16 and Minimum wages

Assit Engineer

Asst. Exe.Engineer

Executive Engineer

Executive Engineer
Byatarayanapura Division
Yelahanka Zone, B.B.M.P.
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